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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.   | CONFIRMATION NO. |
|--|-------------|----------------------|-----------------------|------------------|
| 10/747,693   | 12/30/2003  | Kazutaka Inukai      | 12732-204001 / US6879 | 2849             |
| 26171  | 7590        | 10/28/2004           | EXAMINER              |                  |
| FISH & RICHARDSON P.C.<br>1425 K STREET, N.W.<br>11TH FLOOR<br>WASHINGTON, DC 20005-3500 |             |                      | YOUNG, BRIAN K        |                  |
|  |             |                      | ART UNIT              | PAPER NUMBER     |
|  |             |                      | 2819                  |                  |

DATE MAILED: 10/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/747,693

Applicant(s)

INUKAI, KAZUTAKA

Examiner

Brian Young

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2819

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on the application filed 7/28/04.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-3, 5-7 and 10-15 is/are rejected.  
7) ☒ Claim(s) 4, 8 and 9 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7/28/04  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_

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1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1,2, 3,5-7, and 10-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Koyama et al.

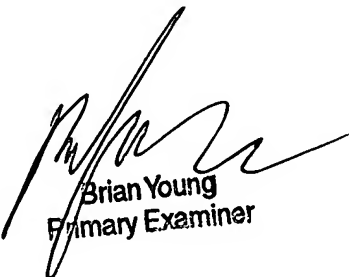
3. Koyama et al disclose, FIG. 7, D/A converter 11 has a constant current circuit L.sub.M for a monitor, in addition to the common constant current circuits L.sub.1, L.sub.2, . . . , L.sub.255 that generate video signals 20. In the constant current circuit L.sub.M, a switch S.sub.M, which is almost the same as the FET switches S.sub.3 of the other constant current circuits, is connected in series. The constant voltage power supply V.sub.CC is supplied to the source side of the FET switch S.sub.M, and the drain side is grounded at the GND via a resistor R ( $R=V_{sub.CC}/I_{sub.0}$ ). The resistor R functions to change to a monitor voltage V.sub.M a monitor current I.sub.M that flows through the constant current circuit L.sub.M. A differential amplifier 34 extracts the monitor voltage V.sub.M at point P and receives it at its input terminal that is on the non-inverted voltage side, while it receives referential voltage V.sub.ref that is externally generated at the inversion input terminal. A gate voltage that is consonant with the potential difference between the monitor voltage V.sub.M and the referential voltage V.sub.ref is supplied to the FET switches S.sub.3 of the constant current circuits L.sub.1, L.sub.2, . . . , and L.sub.255, and thus the feedback control for the output current I.sub.0 is realized. In other words, the method shown in FIG. 7 accomplishes the

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feedback control indirectly by using the constant current circuit  $L_{sub.M}$ , which differs from the constant current circuit that is originally employed for the output.

The feedback control shown in FIG. 7, however, is provided with the presumption that the FET switch  $S_{sub.M}$  for a monitor has the same characteristic as the switches  $S_{sub.3}$  of the constant current circuits, and that the current  $I_{sub.M}$  that flows through the constant current circuit  $L_{sub.M}$  for a monitor has the same intensity as the output current  $I_{sub.0}$  that flows through the other constant current circuits  $L_{sub.1}, \dots$ . In other words, the problem concerning the variance in the switching characteristics of the semiconductor switches on a chip is not solved. Therefore, if there is a difference  $\Delta I$  in the output current between the switches  $S_{sub.M}$  and  $S_{sub.3}$ , because of the variance in the switching characteristics, through the output terminal 41, the difference  $\Delta I$ , either directly or after being accumulated, appears as luminance fluctuation on the screen and deteriorates image quality. In addition, the current that is consumed by the constant current circuit  $L_{sub.M}$  for a monitor do not relate to an original video signal, and even though it is slight, there is an increase in the power consumption.

4. Claims 4, 8, and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.



Brian Young  
Primary Examiner